

**Appl. No. 10/799,170**  
**Amdt. dated October 14, 2005**  
**Reply to Office action of July 14, 2005**

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Figs. 1 and 2, replaces the original sheet including Figs. 1 and 2. In Figure 1, the words "prior art" have been added.

Revised Figs. 4A and 4B are also included. No changes have been made to Figs. 4A and 4B. Figs. 4A and 4B have been redrawn so that the lines are darker.

Attachment: Replacement Sheets

### REMARKS/ARGUMENTS

Applicant has received the Office Action dated July 14, 2005, which: 1) reminds Applicant of the proper format of the Abstract; 2) objects to the Drawings; 3) rejects claim 1 under 35 U.S.C. § 102(e) as allegedly anticipated by *Desplats et al.* (U.S. Pat. No. 6,891,363, hereinafter "*Desplats*"); 4) rejects claims 2, 3, 16, 23, and 24 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats* in view of *Breu* (U.S. Pat. No. 5,023,916); 5) rejects claims 4, 6, 7, 10, 12, and 13 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats* in view of *Tsuchiya* (U.S. Pub. No. 2003/0078503); 6) rejects claim 5 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats*, in view of *Tsuchiya* and further in view of *Ishiga* (U.S. Pub. No. 2003/0026477); 7) rejects claim 8 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats*, in view of *Barrett et al.* (U.S. Pat. No. 6,392,235, hereinafter "*Barrett*"); 8) rejects claim 9 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats*, in view of *Ackermann et al.* (U.S. Pat. No. 6,839,656, hereinafter "*Ackerman*"); 9) rejected claims 17-19 and 21 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats*, in view of *Breu* and further in view of *Tsuchiya*; 10) rejects claim 20 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats*, in view of *Breu*, *Tsuchiya*, and *Ackermann*; 11) rejected claim 22 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Desplats*, in view of *Breu* and *Barrett*; and 12) objected to claims 14 and 15.

With this Response, Applicant: 1) amends claims 1, 4, 9, 12, 14, 15, 16, and 23; 2) cancels claim 2; 3) adds new claims 25 and 26; 4) amends the Drawings; and 5) amends the Abstract. Therefore, claims 1 and 3-26 remain pending.

#### I. CLAIMS 14 AND 15

The Office Action objects to claims 14 and 15, as being dependent on a rejected base claim, but otherwise allowable if rewritten in independent form. Applicant appreciates the effective allowance of claims 14 and 15, and has rewritten them in independent form accordingly.

## II. DRAWINGS

The Office Action objects to Figure 1 because it is not labeled as "Prior Art" and objects to Figures 4A and 4B because the lines are too light. Accordingly, Applicant amends Figure 1 as "Prior Art" and Figures 4A and 4B to darken the lines. Applicant respectfully submits that no new matter is added by these amendments.

In addition, the Office Action objects to Figure 3 because line 506, which represents measured photon emission, is difficult to distinguish from line 508, which represents the modified distribution that results from convolving the ideal photon emission 504 by a probability density function (PDF). Applicant respectfully submits that these two lines should be very close to each other, and in some embodiments, they may be identical when the PDF chosen to approximate the distribution that is present matches the distortion in the measured emission.

In order to allow lines 506 and 508 to be distinguished from each other more easily, Applicant can submit a color drawing as a replacement sheet, or alternatively, Applicant can submit an additional drawing that shows an exploded view of lines 506 and 508. Applicant respectfully requests the Examiner's guidance on this issue.

## III. ABSTRACT

The Office Action reminds Applicant of the preferred narrative language for Abstracts in general. Accordingly, the Abstract has been amended to read more narratively. Applicant respectfully submits that no new matter is added by this amendment.

## IV. THE CITED ART IS NOT PROPERLY COMBINABLE

The Office Action rejects each of the pending independent claims,<sup>1</sup> under § 102 or under § 103, as allegedly unpatentable over *Desplats* either alone or in conjunction with the *Breu*. Applicant respectfully traverses because *Desplats* fails

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<sup>1</sup> Since the elements of canceled claim 2 have been amended into claim 1, Applicant will address the original § 103 rejections of claim 2 in the context of claim 1.

to teach or suggest all of the claim elements and is not properly combinable with *Breu*.

For example, claim 1, as amended, recites (emphasis added):  
A method of determining distortion in a image of an integrated circuit, comprising: measuring photon emissions for a potential photon emission area within the integrated circuit; comparing an expected level of photon emission with the measured photon emissions; and predicting an amount of distortion for the potential photon emission areas based on results of comparing the measured photon emissions to the expected photon emission level; wherein the potential photon emission area is defined using a layout database.

As noted in the Office Action at page 5, *Desplats* “does not teach using a layout database.” The Office Action contends that (emphasis added) “*Breu* teaches using a database for the printed circuit board to find expected locations on a circuit board,” and that one of ordinary skill in the art would combine *Desplats* with the teachings of *Breu*. Office Action at 5, ¶ 1. Applicant respectfully traverses.

*Desplats* “involves apparatuses and methods for analyzing photon emissions from an integrated circuit (IC)...” Col. 7, ll. 4-5 (emphasis added). Further, the imaging station 102 of *Desplats* includes “a detector that has a field of view ... which may be used to obtain photon emission data for an IC area of about 160 microns by 160 microns.” Col 7, ll. 57-59 (emphasis added). *Breu* fails to even mention the word “photon,” which begs the question as to why one of ordinary skill in the art faced with the problems of the instant application would even look to *Breu* without engaging in impermissible hindsight. Nevertheless, even if one of skill in the art could look to *Breu* without engaging in impermissible hindsight, the dimensions of any printed circuit board (including the printed circuit boards of *Breu*), are such that imaging them with the detector of *Desplats* (which teaches a maximum field of view in the micron range) is technically implausible. Applicant respectfully submits that this fact alone would actually motivate one of ordinary skill in the art not to combine *Breu* and *Desplats*. Accordingly, combining

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*Breu* and *Desplats* in an effort to establish a prima facie case of obviousness against the pending claims is improper.

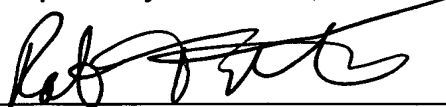
In an effort to emphasize the distinction between the cited art and the pending claims, Applicant amends the pending independent claims to include specific reference to an integrated circuit rather than a printed circuit board.

#### **V. CONCLUSION**

In the course of the foregoing discussions, Applicant may have at times referred to claim elements in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other elements can be ignored or dismissed. The claims must be viewed as a whole, and each element of the claims must be considered when determining the patentability of the claims.

Applicant respectfully requests reconsideration and that a timely Notice of Allowance be issued in this case. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



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